

BOROUGH OF



COLCHESTER.

URBAN DISTRICT.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1912.

BOROUGH & PORT HEALTH COMMITTEE,
1912—13.

Chairman :

Alderman HENRY LAVER, J.P., M.R.C.S., F.S.A.

Deputy-Chairman :

Councillor R. B. BEARD, J.P.

THE MAYOR :

(Councillor W. Coats Hutton, J.P.).

Alderman E. ALEC BLAXILL, J.P. Councillor F. W. RICHARDS.

Councillor J. W. BARE. „ W. H. TAYLOR.

„ H. J. EVERETT. „ A. WENT.

Staff of the Public Health Department, 1912.

*Medical Officer of Health and Medical Superintendent of the
Isolation Hospital :*

WALTER F. CORFIELD, M.D., B.S., D.P.H.

Sanitary Inspector :

T. WELLS, Cert. Roy. Sanit. Inst., Cert. Meat Inspector.

Assistant Sanitary Inspector :

C. S. HUMPHREYS.

Disinfectors :

G. T. HEWES.

Health Visitor :

Miss SASSE.

Clerk and Laboratory Assistant :

A. FISHER, Cert. Roy. Sanit. Inst.

Matron of the Isolation Hospital :

Miss K. BRAIDWOOD.

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PUBLIC HEALTH DEPARTMENT,

36, STANWELL STREET.

20th March, 1913

TO THE MAYOR, ALDERMEN AND COUNCILLORS
OF THE BOROUGH OF COLCHESTER.

GENTLEMEN,

I have the honour to present to you my fourth Annual Report upon the health and sanitary circumstances of the Borough of Colchester.

Many changes have been brought about during the year that has just passed, and one that will have a great effect upon the health of the Country is the increased interest that is being shown in the prevention of Tubercular disease.

No one with any knowledge of the subject will deny that an enormous amount of preventible sickness and suffering is caused by Tuberculosis. The importance of measures to reduce this cause of illness cannot be insisted upon too strongly.

The year under consideration in the following report, has been exceptional in four distinct ways.

The *death-rate for 1912 was lower than it has ever been* since records have been kept, being only **10·6 per 1,000** of the population.

The *infantile mortality rate is also a record for lowness*, some 30 more infant lives being saved than was to be expected.

The number of persons who have suffered from Scarlet Fever is less than it has been since this disease has been notifiable.

Lastly, 102 fewer infants were born in 1912 than in the previous year, the birth-rate of 19·7 per 1,000 inhabitants being probably the lowest that Colchester has ever known.

The work of the Department has increased considerably owing to new legislation, and increased accommodation is greatly needed.

In conclusion I beg to thank the Chairman and Members of the Borough and Port Health Committee for their continued support in my work, and also to thank the Staff of the Department and Isolation Hospital for their loyal assistance throughout the year.

I am, Gentlemen,

Your obedient servant,

WALTER F. CORFIELD,
Medical Officer of Health.

Report of the Medical Officer of Health for the Year 1912.

VITAL STATISTICS.

1. In the following Table are set out the more important Statistical Results obtained from the number of births and deaths that occurred in Colchester during 1912. In the table similar results for three other towns of about the same size and circumstances as Colchester are given for comparison :—

	Colchester.	Bath.	Rochester.	Cheltenham.
Population (at middle of 1912)	44,160	69,598	31,489	49,500
Birth-Rate	19·7	16·7	23·8	15·7
Nett Death-Rate	10·6	12·9	12·6	13·2
Infantile Death-Rate ...	64·1	76·0	83·7	66·0
Zymotic Death-Rate ...	·29	·65	·88	·36
Respiratory Diseases Death-Rate (excluding Phthisis)	1·4	2·1	1·9	1·6
Pulmonary Tuberculosis Death-Rate	·88	·89	1·1	·79
Other Tubercular Diseases Death-Rate	·36	·13	·3	·22
Cancer Death-Rate.....	1·0	1·3	1·1	1·2

2. These rates are all calculated per 1,000 inhabitants except the infantile mortality rate; this is calculated per 1,000 children born during the year.

The Zymotic death-rate means the rate produced by deaths caused by the principal Zymotic diseases; these are :—Small-pox, measles, scarlet fever, diphtheria, whooping cough, enteric fever and infantile diarrhoea.

3. The estimated population of 44,160 gives an increase of 697 persons over the census population of 1911.

The natural increase—that is the increase of the births over

the deaths for the year—was 403. This figure is lower by 33 than that of last year, and this reduction is due to the very great drop in the birth-rate.

4. The members of the Garrison and their families are included in the population, the average daily strength of the Garrison for 1912 being—

Officers	...	...	...	113
Men	...	...	...	3347
Women	...	...	...	320
Children	...	...	...	546
Average daily total strength			...	4326

This is a decrease of 20 below the average daily strength in 1911.

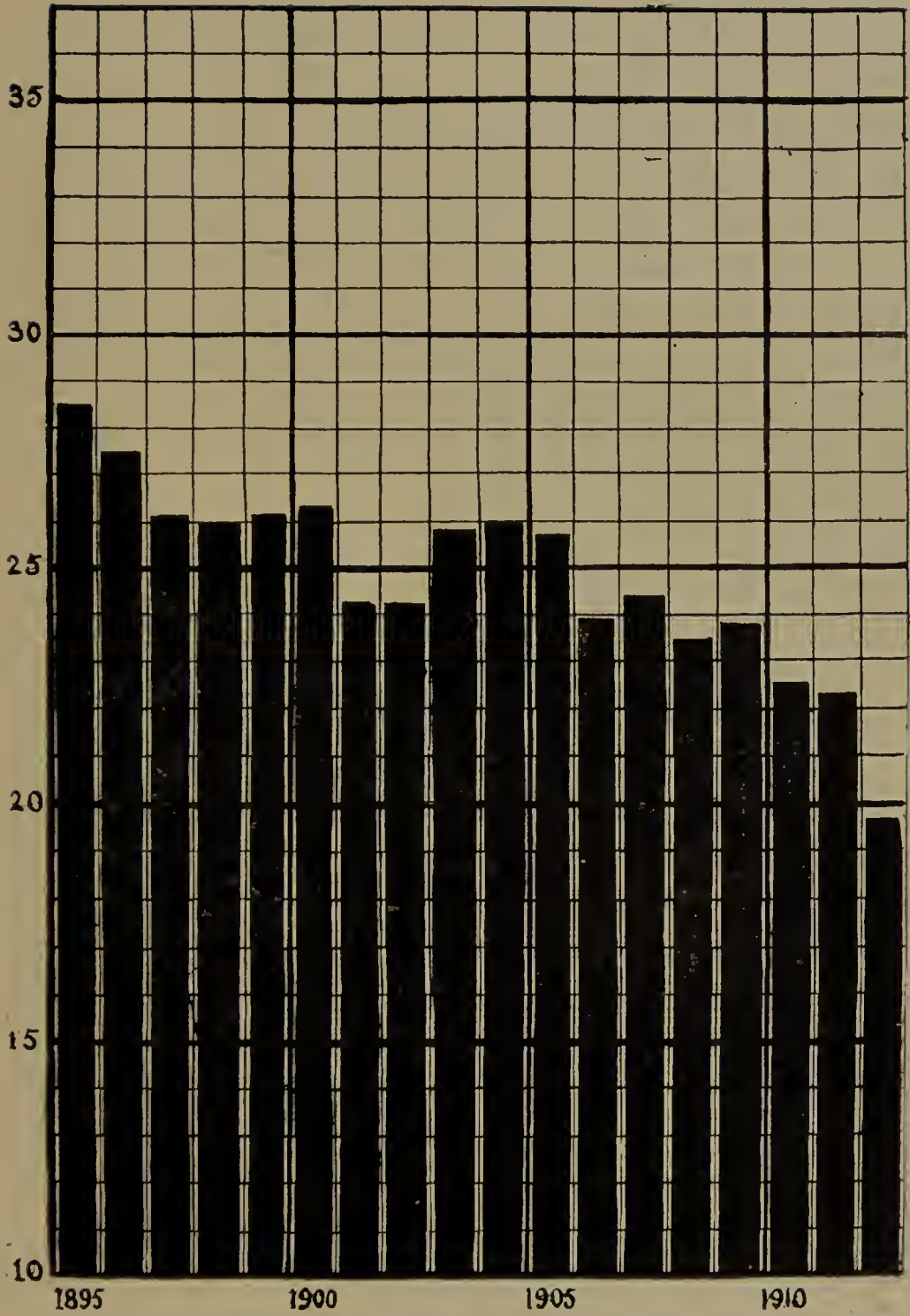
These figures were again kindly supplied by Colonel F. J. Jenken, Assistant Director of Medical Services, Colchester District.

BIRTHS.

5. There has been an astonishing fall in the number of children born during 1912, as is well shown in chart A. For several years past fewer children have been born all over England, and the birth-rate of Colchester has diminished as elsewhere, but this diminution has been gradual, averaging a loss of some 5 or 10 births a year; but in 1912 the number of children born fell from 975 in 1911 to 873, a loss of 102 children and a fall in the birth-rate from 22·4 to 19·7.

It is extremely difficult to account for this sudden decrease. The gradual diminution has been ascribed to increased competition delaying the marriage age, so that young persons who formerly married about the age of 20 or thereabouts do not now marry until 25 or later, thus reducing the possible period of child bearing, and also to the deliberate limitation of the number of children born. Neither of these causes appears sufficient in themselves to account for this great fall, and it is probable that another year will see the rate approach its former figure, though under prevailing conditions it can only be a few years before it fall back to 19·7 and even lower. In connection with this fall in the birth-rate

CHART A.



BIRTH-RATES FOR YEARS 1895-1912.

it is important to consider what means can best be taken to prevent the deaths of infants. During the year under consideration the Health Visitor has carried out some excellent work in this direction, this work is described on page 14.

6. The births were divided into 420 boys and 453 girls. They were distributed in the wards as follows :—

	North.	South.	East.	West.
Males ...	69	151	97	102
Females	90	159	110	92

Three infants belonging to Colchester were born outside the district.

There were 45 Illegitimate Births—equal to 5·1 per cent. of the total births, this percentage last year being 3·4.

DEATHS.

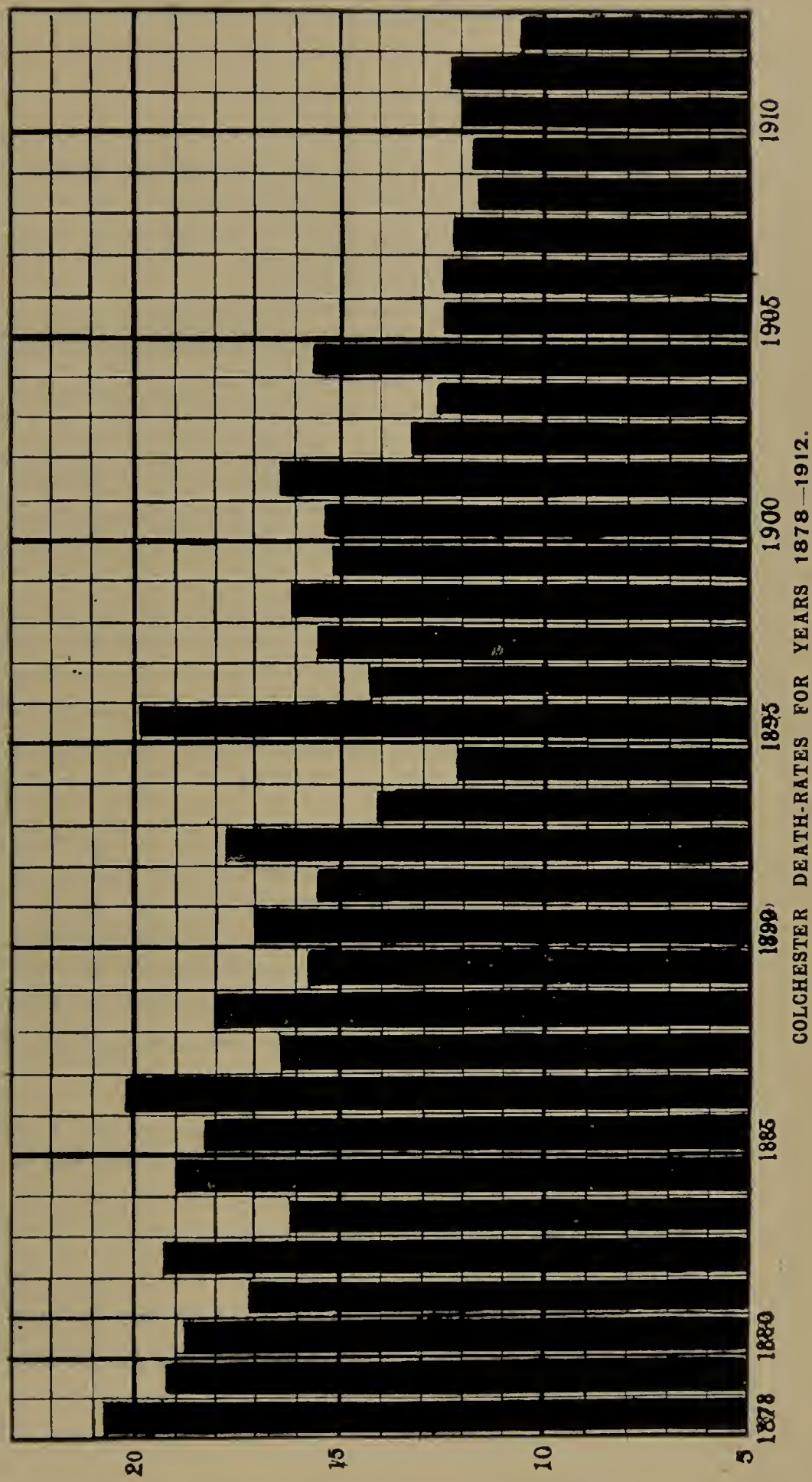
7. The number of deaths registered in the district during 1912 was 500, but 50 of these were persons who were not Colchester residents, and their deaths were transferred to their own districts; similarly 20 deaths of Colchester residents who had died elsewhere were transferred from other districts to Colchester; thus the nett number of deaths belonging to the borough was 470. This total number has only once been lower since 1878, and that was in the year 1894 when only 434 deaths were recorded, but then the population was smaller by more than 8,000 persons, consequently the death-rate of **10·6** for 1912 is a record that has never been nearly approached previously. In fact it is probably correct to state that Colchester has never before had so low a death-rate (see chart B).

8. Among the military population 18 deaths took place.

The number of deaths that occurred in institutions is given in the following table :—

	Residents.	Non-Residents.	Total.
Essex County Hospital	36	23	59
Colchester Workhouse	56	—	56
Eastern Counties Asylum	—	20	20
Mile End Infectious Hospital	2	2	4
Colchester Nursing Home	—	2	2
	<hr/> 94	<hr/> 47	<hr/> 141

CHART B.



9. The following table shows a comparison between the birth and death rates of England and Wales as a whole, the 95 large towns and 146 smaller towns as divided by the Registrar-General, with these rates for Colchester.

	Annual Rates per 1,000 Living.			Deaths under One Year to 1,000 Births.
	Births.	Deaths.		
		Crude.	Corrected*	
England and Wales	23·8	13·3	13·3	95
95 great towns, including London ..	24·9	13·8	14·6	101
146 smaller towns, including Colchester ..	23·8	12·4	13·0	99
England and Wales, less the 241 towns ..	22·6	12·9	12·1	86
Colchester	19·7	11·3	11·2	64

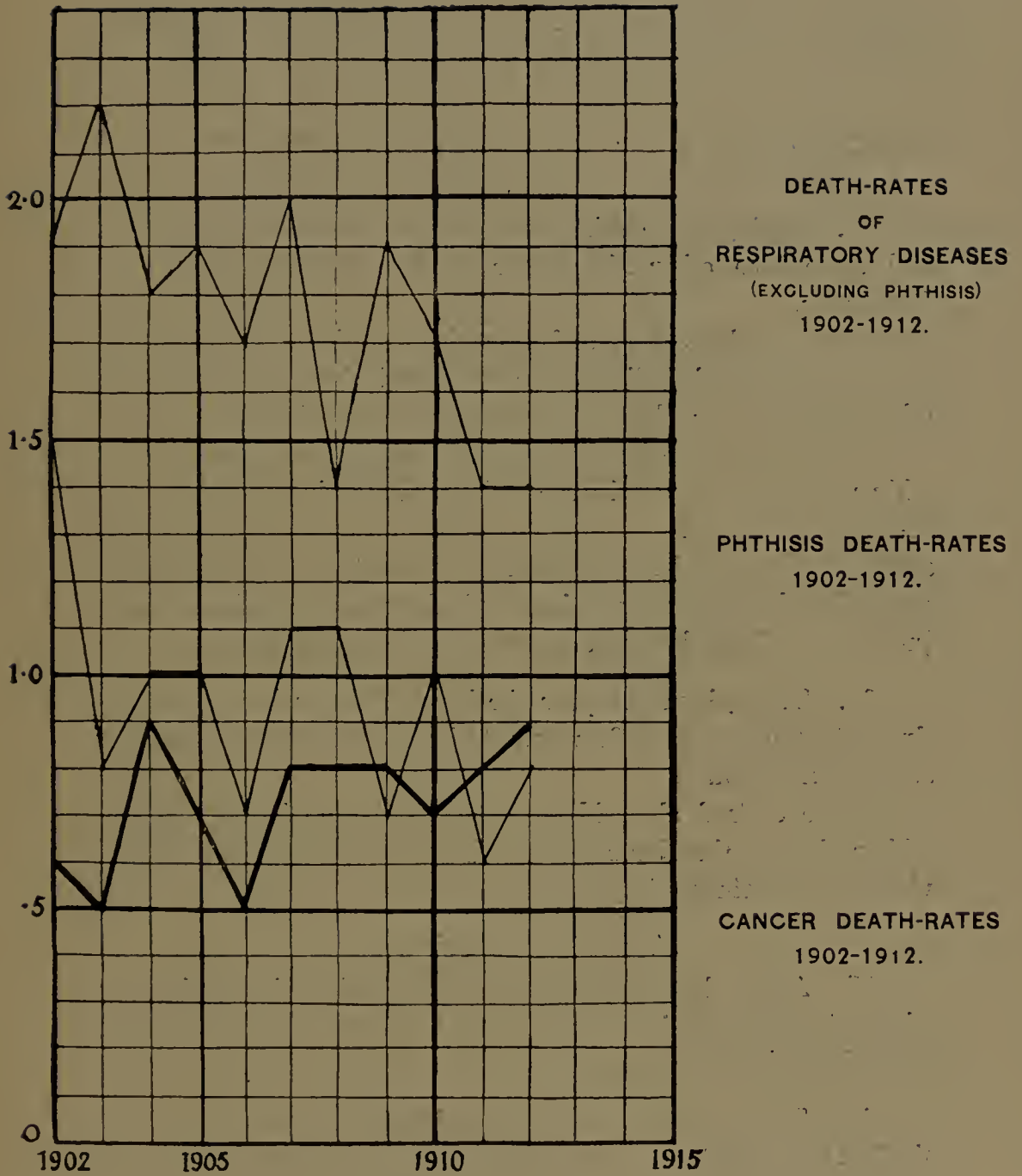
10. When the deaths are considered for the past ten years it is very noticeable that the chief causes of death after the age of five are Pulmonary Tuberculosis, Other Respiratory Diseases, Cancer and Heart Diseases. The last term is too general to be of much use for comparative purposes, but the death-rates of the three former may be well compared as is done in Chart C.

11. From this chart it will be seen that the Respiratory Diseases and Phthisis death-rates are steadily falling, though frequently, as the chart shows, a year that has had a low phthisis death-rate has had an increased respiratory diseases death-rate and vice versa. The reason for this is not very clear, for the one rate should not affect the other in any way. Speaking generally old people die from respiratory diseases and young people from phthisis.

12. Turning now to the Cancer death-rate one finds a gradual but steady increase of deaths from this cause, and this is the experience throughout the country. The increase has been ascribed to many causes, chief among them being, that increased knowledge

*The corrected death-rates are the rates which would have been recorded had the age and sex constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901. The corrections applied to the crude rates have been necessarily based upon the constitution of the population of the areas as enumerated in 1901, and are therefore only approximately applicable to the conditions of 1912.

CHART C.



and better methods of diagnosis have enabled more correct certification of death to come about. But it is generally considered to be a fact that even allowing for such increased knowledge there is a definite increase of deaths from cancer, and that this increase is particularly marked in cancer of the stomach and intestines.

MORTALITY IN CHILD-BIRTH AND IN INFANCY.

13. During the year there was one death from Puerperal Fever and three from other Diseases or Accidents of Parturition or Pregnancy.

These numbers compare favourably with those of 1911, when three women lost their lives from Puerperal Fever and five from other diseases or accidents of Pregnancy or Parturition.

Undoubtedly the knowledge that the Health Department is taking an active interest in the welfare of new-born babies puts the Midwives upon their metal, and they are more careful and particular in order that adverse comments may not be made upon the cleanliness or tidiness of the room or child. It is just at such times that extra care makes a great difference.

14. Throughout the year the infant visiting has been continued by Miss Sasse, at first voluntarily but later as a part-time officer of the Council.

Nurse Gillard also did some of the infant visiting, undertaking that of the North Ward, while Miss Sasse confined her visiting to the three other wards.

Notification of Births Act.

15. After the experience gained of the Notification of Births Act last year it was possible to lay down definite lines for the visiting during 1912.

16. Three visits at least were paid to each new-born child, the first within the first week of birth, but after the third day. It was found in many instances that when this visit had been paid within the first three days after the birth of the child, information that had been given had been forgotten and leaflets of advice lost,

but that after the third day both mother and midwife took a more particular interest in the well-being of the child, and careful attention was given to both information and leaflets.

The second visit is paid at the end of the first month and the third visit when the baby is three months old. If it is found at the first visit that a doctor is in attendance upon the mother no more visits are paid.

17. The following table shows how 453 babies were fed or what became of them during the time they were being visited :—

First Visit.

Breast Fed...	...	...	451	Doctor Attending	...	38
Cows' Milk and Water	...	...	1	Boat-Bottles used*	...	3
Condensed Milk	...	...	1	Long-tube Bottles used	...	0
				Spoons used	...	0

Number of Infants visited 453.

Second Visit.

Breast-Fed ..	...	...	420	Doctor Attending	...	2
Cows Milk and Water	...	...	3	Left the Town	...	3
Condensed Milk	...	...	3	Boat-Bottles used*	...	11
				Long-tube Bottles used	...	0
				Spoons used	...	4

Number of Infants visited 426.

Third Visit.

Breast-Fed...	..	...	314	Doctor Attending	...	7
Cows Milk and Water	...	...	2	Left the Town	...	15
Condensed Milk	...	...	3	Boat-Bottles used*	...	10
				Long-tube Bottles used	...	0
				Spoons used	...	2

Number of Infants visited 319.

The number of third visits decrease considerably because many of these visits were not due until 1913.

18. The majority of the births that occur are notified either within the prescribed period of 36 hours or very soon afterwards, but in 64 cases the births were not notified, and in these instances the health visitors made enquiries as to why the Act had not been

*Some of the Breast-Fed babies were given extra milk.

complied with, and notices were sent to the medical man or midwife in attendance and to the father of the child, if at home when the child was born.

The Act has worked quite smoothly, and though at first some of the medical practitioners objected to it, yet its value was so apparent and the trouble involved so small that in very few, if any, of the 64 cases above mentioned was the omission due to other than forgetfulness or misunderstanding.

The following table gives the number of births notified in accordance with the Act and the number not so notified :—

	1912.	1911. May to Dec.
Number of children born alive and notified in accordance with the Act ...	754	549
Number of children born alive and notified a few days later than the time specified in the Act	53	16
Number of children born alive and notified after a notice had been sent ...	28	
Number of children born alive and not notified	64	78
Number of still-births notified in accordance with the Act	37	15

A notice is, in every case, sent to the parents and attendant when it is found from the Registrar's returns that a birth has not been notified.

INFANTILE DIARRHŒA AND MORTALITY.

19. The past year has been an exceptional one in many ways, and not the least has been the extraordinary drop in the infantile mortality rate.

Infantile deaths from Diarrhœa depend to a very great extent upon the temperature of the summer months. This is well shown in chart D.

Last summer was very wet and cold, the four-foot earth thermometer averaging only 58° F. for the months of August and

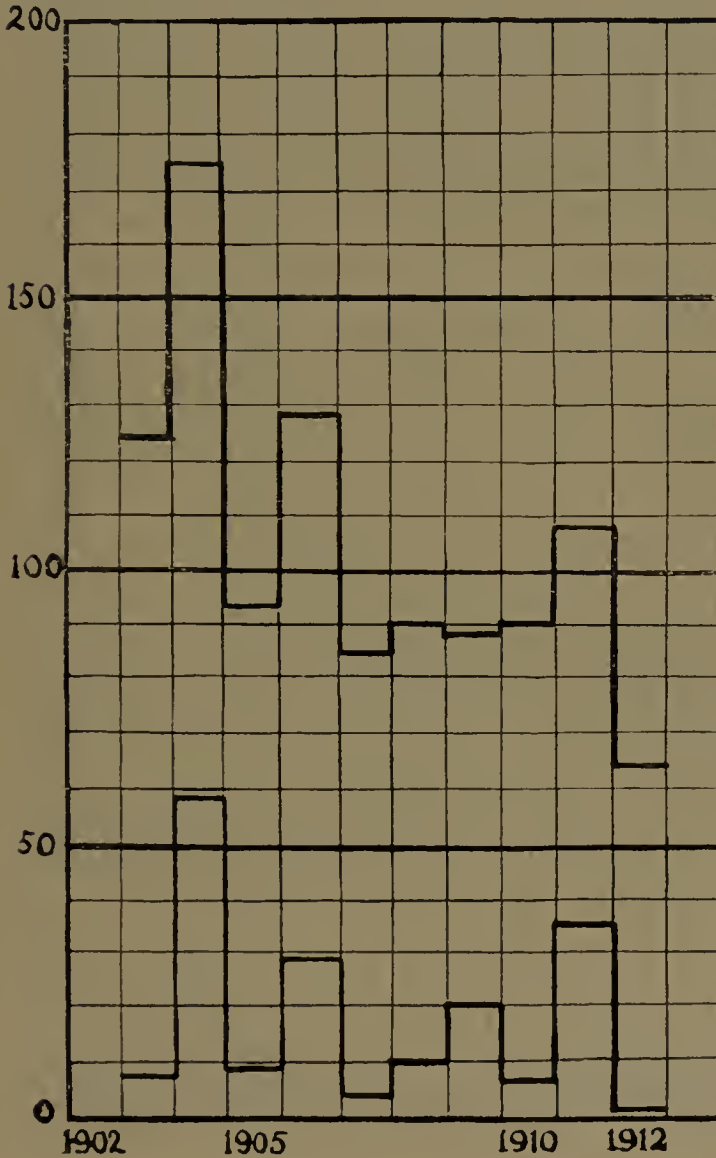
CHART D.

1907 1908 1909 1910 1911 1912



MEAN
TEMPERATURE OF
4FT. EARTH
THERMOMETER
DURING
AUGUST AND
SEPTEMBER.

RATES PER 1,000 BIRTHS.



INFANTILE
MORTALITY RATES.

INFANTILE DEATHS
FROM DIARRHŒAL
DISEASES.

September. But the effect upon Infantile Diarrhoea was most beneficial, only one death being recorded from this cause.

The work of the Health Visitor also, no doubt, contributed to this happy result, and this is shown still better when the deaths from Atrophy, Debility and Marasmus for 1912 are compared with those of the past few years :—

1908.	1909.	1910.	1911.	1912.
18	14	18	17	6

20. Early in the summer leaflets describing methods for the prevention of infantile diarrhoea are taken by the Health Visitor to all parents with children of under one year of age. In 168 instances these leaflets were left when the visits under the Notification Act were made, but besides these it was necessary to pay 241 visits on account of infants of over three months old.

At these visits enquiries were made about how the child was being fed, and advice was given. The information thus obtained is tabulated below :—

How Fed.	3-6mths.	6-9mths.	9-12mths.	Total.
Breast-Fed	40	68	103	211
Cow's Milk and Water	2	4	12	18
Condensed Milk	1	3	8	12
Patent or other Foods	1	2	3	6

Fed from Boat-Bottles... 30. From Spoons... 11

From Long Tube Bottles... 5.

It is to be noted with satisfaction that out of these 247 infants 229 were either fed at the breast or upon cow's milk; many of the older children were fed upon other foods besides milk.

21. A steady decline in the popularity of the long-tube bottle is very noticeable. The figures for the past few years are given below :—

1908.	1909.	1910.	1911.	1912.
47	45	34	15	5

In his annual report in 1908, Dr. Savage, the then Medical Officer of Health, reported “. . . . in 1905 and 1906 *two-thirds* of the feeding bottles used were the abominable long tube

variety; now only *one-third* are of this kind." Now just four years later the work he initiated so ably is being completed; this year only just over one per cent. of the infants visited were being fed from long tube bottles.

22. In one instance by the special request of a medical practitioner the Health Visitor paid regular and constant visits to an ailing infant and instructed its mother in feeding and caring for it with the result that the child got well, and is still alive and healthy.

INQUESTS.

23. The Borough Coroner, Mr. H. Geoffrey Elwes, has again kindly supplied the following details relative to inquests held in the Borough :—

Cause of Death.	Males.	Females.	Total.
Murder .. .. .	..	1	1
Suicide	3	..	3
Accident or Misadventure	9	5	14
Natural Causes	6	1	7
Open Verdicts : —			
Drowning	1	1	2
Unknown Causes	One, sex unknown		1
	20	8	28

The ages of the above subjects for enquiry were :—

	Males.	Females.	Total.
Under 1 year	2	2	4
1 year and under 7 years .. .. .	..	..	..
7 " " 16 " .. .. .	..	..	..
16 " " 25 "	2	3	5
25 " " 60 "	11	3	14
60 years and over	4	..	4
Age and sex unknown .. .. .	..	..	1

In seven of the above cases the deceased did not reside in the Borough.

Besides these, 31 other cases were reported to the Coroner, but after preliminary enquiry no inquest was deemed necessary.

NATURAL AND SOCIAL CONDITIONS.

24. The physical conditions of the Colchester District were fully considered in the Report for 1911, and as these do not vary it would be redundant and unnecessary to repeat what was said a year ago.

25. Poor Relief for the year ending Michaelmas 1912 for In-Maintenance was £78 18s. 1¼d. more than in the previous year, being £4,239 19s. 11¼d. Whereas Out-Relief amounted to £2,545 10s. 0¼d., being a reduction of £198 10s. 4¾d., when compared with the amount of the Out-Relief during the preceding 12 months.

26. The County Hospital is situated in Colchester, but of course serves a much larger area than the Colchester District. During the year there were 100 beds available at the hospital, and the average number of patients resident daily was 84. The number of new Out-patients that were treated was 2,746, and the total number of Out-patient attendances 8,282.

WATER SUPPLY.

27. No alteration has been made in the water supply during the year and the quantity of water pumped during the year was less by 2,000,000 gallons than was pumped last year. No doubt the wet, cold summer was the cause of this difference.

The Lexden Spring water was regularly examined bacteriologically throughout the year with a uniformly satisfactory result.

The water from the Artesian Well was also examined, and the most superficial spring supplying the well was examined separately, both with satisfactory results.

The table below sets out these analyses :—

Bacteriological Analysis of the Colchester Water Supply.

Date of Sampling.	Source.	Number of Organisms developing per C.C. at		Bacillus Coli.			Streptococci.		
		37°C	22°C	1	10	50	1	10	50
January 12th	Lexden Reservoir	4	3	—	—	—	—	—	—
Feb. 20th ..	..	4	5	—	—	—	—	—	—
March 14th ..	..	1	1	—	—	—	—	—	—
April 10th ..	..	15	21	—	—	—	—	—	—
May 21st ..	..	12	19	—	—	—	—	—	—
June 20th ..	..	63	68	—	—	—	—	—	—
July 12th ..	..	54	72	—	—	—	—	—	—
Sept. 11th ..	..	3	3	—	—	—	—	—	—
Oct. 14th ..	..	3	7	—	—	—	—	—	—
Nov. 14th ..	..	3	10	—	—	—	—	—	—
July 5th ..	Artesian Well ..	27	21	—	—	—	—	—	—
July 20th ..	Side Spring of Artesian Well ..	17	46	—	—	—	—	—	—
Oct. 2nd ..	Well near Ipswich road ..	350	500	—	—	—	—	—	—
Aug. 2nd ..	Well at a farm ..	220	176	—	—	—	—	—	—

The well near the Ipswich road was sunk upon Corporation land, and before it was used by the adjoining cottagers it was considered advisable to have it analysed.

The well at a farm had the water from it analysed in connection with a case of Typhoid that had occurred in the neighbourhood.

23. The Waterworks Superintendent, Mr. Charles E. Bland, has sent me the following report upon the work of his department during the year.

REPORT OF THE WATERWORKS SUPERINTENDENT.

I beg to submit the following report upon the work of the Water Supply Department for the year ended 31st December last.

Mains.—During the year 598 yards of new mains have been laid, and 1,000 yards replaced, making their present total length 50 miles, 1,623 yards.

Houses Supplied.—There are 9,314 houses supplied from the Council's mains, exclusive of the Stanway District. In connection with the latter there are 119 houses, making the total number, *exclusive of the Garrison and trade and business premises, stables, &c.*, 9,433.

Number of Persons Supplied.—Taking an average of 4·8 people per house (Government Census return), and allowing for empty houses, an estimated civilian population of 42,825 received a supply from the Council's mains. This figure does not include the Stanway District above referred to, or trade, &c., supplies.

The Stanway District (based upon the above estimate) numbered 571, and the average strength of the military was 4,326, making a grand total of 47,722 persons using the water of the Council.

Meters.—The total number of meters in use is 227.

Defective Fittings.—In examining properties for the purpose of waste detection, our inspectors discovered 4,556 leaky and defective fittings.

Of this number 3,882 were repaired free of charge by our staff, and the remaining 674 defects were remedied by the owners after notices had been served upon them.

Quantity of Water Pumped.—The total quantity of water pumped during the year was 370,162,250 gallons, viz. :

	Gallons.
Pumped into the Water Tank, Balcerne Hill ...	325,499,250
Surface spring water supplied (by separate mains and reservoirs) to Great Eastern Railway Company's North Station... ..	44,663,000
	<u>370,162,250</u>

The Average Consumption per head per day for all purposes, including road watering and making, fire extinguishment, flushing sewers, trade and business purposes (but excluding the G.E.R. Company's spring water supply), was 18·35 gallons.

Hydrants.—The number of hydrants in the Borough for fire extinguishment, road watering and other purposes is 453.

Lexden Water.—The yield of the Lexden Springs continues highly satisfactory, as does also the quality of the water, which has been analysed monthly by the Medical Officer of Health.

New Coal Store.—An additional coal store has been erected at a cost of £150 during the year, with a storage capacity of about 150 tons.

The Committee considered this expenditure expedient in order to meet any contingency that might arise in connection with the labour market or otherwise—with this additional storage we should, in all probability, always have not less than 200 tons of coal at the works, which would carry us over a period of nearly three months.

Finance.—The income still increases, and it is gratifying to bear in mind that the progress of the Department may be said to have been continuous.

(Signed) CHAS. E. BLAND,
Waterworks Superintendent.

DRAINAGE, SEWERAGE AND SCAVENGING.

29. The Borough Surveyor, Mr. H. Goodyear, has submitted the following report upon the work of his department during the year.

BOROUGH SURVEYOR'S REPORT.

I have much pleasure in submitting my report of works carried out in the Roads and Drainage Department during the year 1912 :—

Drainage Works.—Glazed stoneware sewer pipes have been laid as follows :—

Chapel Road, Shrub End	...	1,345 lin. ft. of 9 inch.
Shrub End Road	... ..	4033 „ „ 12 „
Ditto	... ..	526 „ „ 6 „

Lexden Straight Road ...	...	1,254 lin. ft. of 6 inch.
Eld Lane (re-laid) ...	...	295 „ „ 9 „
Lion Walk (re-laid) ...	...	88 „ „ 9 „
		<hr/>
		7541
Harwich Road, surface-water		
drain ...	...	1250 „ „ 9 „
		<hr/>
Total	...	8791 lin. ft.
		<hr/>

27 manholes and 1 flushpipe have been constructed.

The total length of sewers in the Borough is now 62 miles 49 yards.

Buildings and Drains.—119 plans have been submitted to the Council, representing 70 dwelling-houses, 2 public buildings, 9 workshops, 53 additions to buildings, and 33 other buildings.

50 dwelling-houses, and 56 other buildings have been erected.

85 houses, old and new, have been provided with new drains and sanitary fittings.

Buildings and drains have necessitated 1,068 inspections. All new drains have been subjected to a water test before being passed for use.

Maintenance of Roads.—The main and other roads in the Borough have been kept in a good state of repair with Broken Leicestershire Granite, Broken Kentish Ragstone, Kentish Sifted Red Flints, and local stone, rolled in by steam rollers.

Footpath Paving, Kerbing and Channelling.—The following have been laid down in various parts of the Borough:—

1,644 square yards of cement concrete paving,	
249 „ „ tar paving,	
281 „ „ granite, Yorkstone, ragstone, and	
concrete block crossings	
238 lineal yards of York kerbing,	
390 „ „ granite kerbing,	
1,016 „ „ granite, ragstone, York and concrete	
block channelling.	

Removal of Refuse and Cleansing of Streets.—The Council have caused to be removed :—

11,017	cart loads of house refuse,	
494	„	trade „
239	„	garden „
1,055	„	sewage from deadwells,
1,598	„	slop from street gullies,
8,649	„	road scrapings, and
21,307	truck loads of horse-droppings and other refuse	
	from streets and roads.	

All refuse has been removed from the Barracks and other Government properties by Messrs. Colliers, Ltd., under contract with the Council.

Street and Road Watering.—11,872,861 gallons of water have been used for street and road watering and roadmaking.

Treatment of Roads for Prevention of Dust.—100 tons of prepared tar were used during the summer months on the principal roads of the Borough, the treatment proving very successful as a dust preventive.

Widening Improvement.—An important widening improvement has been carried out in Eld lane, extending from Victoria place to Lion walk, the width now being 18 feet 6 inches at the east end in place of the former width of 13 feet 6 inches, and 15 feet 9 inches at the west end in place of 9 feet 6 inches.

Sewerage Outfall Works.—476,447,100 gallons of sewage have been pumped into the tanks at these Works, equal to an average daily flow of 1,301,768 gallons. After precipitation a residue has been left of 21,702 tons, approx., of semi-solid sewage which has been treated with lime, and reduced by pressing to 4,340 tons, approximately, of portable manure or sludge, all of which has been disposed of to farmers and others in the district.

(Signed) H. GOODYEAR,
Borough Engineer and Surveyor.

30. The sewer at Shrub End is now an accomplished fact as may be noted in the Surveyor's Report above.

It will be remembered that it was in this district that a large part of the outbreak of Diphtheria of 1902 occurred, and though cesspools and insufficient sewage disposals cannot as far as is known cause Diphtheria, yet it is now a well-recognised fact that offensive effluvia from open drains or cesspits will cause sore throat and debility in those intermittently exposed to them, particularly in young children, and undoubtedly children in this condition readily fall a prey to any infectious disease that there may be about.

31. In the Report for 1911 the need for a Refuse Destructor was mentioned, and attention was drawn to the nuisance and danger from the present system of disposing of the refuse in tips. Flies and rats readily breed in such places. Flies almost certainly carry the infection from filth and rubbish which causes Infantile Diarrhoea, and as is now well-known Plague is spread by Rats.

32. It has been found possible to do away with several cesspools and privies in the Borough during the year, in all 4 cesspools and 12 privies have been abolished.

REPORT OF THE SANITARY INSPECTOR.

I have the honour of presenting my Seventeenth Annual Report.

Complaints as to Nuisances.—During the year 569 complaints with reference to nuisances have been received. Enquiry is made into each case; the premises are visited and inspected, and if any nuisance is discovered a written or verbal notice is given to, or served upon the person responsible for the abatement of the nuisance. It is at times necessary to serve a notice upon an occupier to abate a nuisance, such as a foul accumulation, animals kept in a filthy state, etc., and usually such notices have the desired effect.

Drainage Work and Supervision.—As mentioned in past Annual Reports many visits and re-visits are made in order to see that the repairs or reconstruction of drains are being properly carried out, and that the work is satisfactorily executed before the final testing, and before the drains are covered up.

Infectious Diseases and Disinfections.—Immediately upon a case of an Infectious Disease being notified, the case is either visited by the Medical Officer of Health or myself, and in most cases removal of the patient to the Infectious Diseases Hospital at Myland is recommended. After removal or convalescence of the patient the premises are thoroughly disinfected, the bedding is afterwards removed and subjected to steam disinfection.

Where in a house a death has occurred from Phthisis the room is disinfected, the bedding removed, and steam disinfection also carried out, together with any articles likely to retain infection.

The room is then afterwards cleansed.

The total number of beds and other articles removed and disinfected by steam was 1,029.

Housing Inspection of District.—A systematic house to house inspection has been carried out as in previous years, and by this means various nuisances are discovered, and defects of a structural character are detected. Notices are served on the owners to remedy these defects. The tabulated statement gives a brief idea of the means adopted to detect defects, and the streets that have been inspected.

Name of Street.	Number of Houses Inspected.	Premises in a Dirty Condition	Defective Drains.	Choked Drains.	Defective Water Closets.	Defective Traps.	Number of Water Closets.	Number of Outside W.C.s not supplied with Water.	Premises Damp and Moulded.	Overcrowding.	Animals improperly kept.	Other Nuisances.	Separate Larders.	Premises without covered Ashbins.
Kendall Road	20	..	..	1	..	..	20	16	1	..	..	28	..	18
Mersea Road	68	1	1	..	4	1	72	16	1	..	..	8	39	25
High Street	122	6	..	..	9	1	157	6	1	..	..	20	54	20
Eld Lane	41	2	..	..	3	2	33	19	..	..	..	8	3	24
Three Crowns Road ..	24	..	..	..	1	..	21	13	1	..	..	11	13	10
Bergholt Road	120	4	..	2	2	2	123	38	3	1	4	22	40	65
Sir Isaac's Walk	15	1	..	..	..	..	11	6	1	..	..	6	6	6
Shewell Road	4	..	..	..	..	..	4	..	..	..	..	1	4	..
Trinity Street	15	..	..	1	..	..	14	4	..	..	..	6	8	4
Hospital Lane	10	..	..	..	..	..	8	6	..	..	..	1	4	1
St. John's Avenue ..	10	1	..	1	..	10	3	..	..	..	..	9	1	4
Morant Road	134	1	2	1	6	..	134	0	2	..	..	36	47	21
Total	583	15	4	5	26	6	610	127	10	1	4	156	219	198

In addition to the above inspections houses have been inspected under the Home Workers Orders made under the Factory and Workshop Acts. Inspections are also made upon complaint, and special inspections are made of premises about which no complaint has been received. Houses in which cases of an infectious disease have been notified are also examined. The total number of houses inspected in the Borough during the year was 3,495. One of the outstanding features of the year's work has been the large number of covered sanitary receptacles which have been supplied by owners whose property was reported to be without sufficient ashpit accommodation. A large number of informal as well as statutory notices have been served during the year; most of the owners have complied upon the receipt of an informal notice, but those failing to comply have been served with a statutory notice and failing compliance with this the Council have themselves carried out the necessary work and charged the owner with the cost. Now that this procedure has become known it has had a very salutary effect as the owners more readily comply with the informal notice served upon them before I report upon their premises to the Public Health Committee. The abolition of old dilapidated ashpits, wooden boxes, and old open tin receptacles, etc., and the substitution of properly covered galvanised iron dust bins in lieu thereof, removes a fruitful breeding ground for the common house fly.

Other premises also are being gradually supplied with sanitary dust bins, where house refuse along with other putrescent matter used to be deposited in a hole, or some corner of the yard. Such places are doubtless the breeding ground of millions of bacteria, which may be of a harmful character, and these gaining access to milk would give rise to diarrhoeal diseases in young children, and thus be responsible for some of the infantile mortality from this class of disease.

By the following table it will be seen at a glance the large amount of work which has been carried out during the year if comparison be made with the five previous years.

Dust bins supplied to houses in 1907	...	13
„ „ „ „ „ „ 1908	...	61
„ „ „ „ „ „ 1909	...	65
„ „ „ „ „ „ 1910	...	103
„ „ „ „ „ „ 1911	...	374
„ „ „ „ „ „ 1912	...	1,202

The provision of such a large number of sanitary receptacles must have a directly beneficial effect upon the surroundings of the premises, and many occupiers have expressed their gratitude to me for the improved conditions under which house refuse can be kept until it is removed.

Housing and Town Planning, Etc., Act, 1909.—Under the above Act I have inspected, and reported upon 33 houses the unsatisfactory conditions of which from a structural point of view were in such a state in my opinion as to render them unfit for human habitation. The owners of 20 of these, upon receipt of an Informal Notice, placed them in habitable repair. The other 13 houses were reported for Closing Orders to be made.

The Registered Common Lodging Houses have been regularly visited. They are kept clean, and their general management is satisfactory. No case of an infectious nature has been notified from them during the year.

Tents, Vans, Sheds, and similar structures have been inspected as in past years. I have inspected any vans which have entered the Borough, and any which have been stationed on land for a short period, in order to find out if any overcrowding or disease existed among the occupiers of such dwellings, and none was found to exist.

The Offensive Trades, which include shops where fish is cleansed and fried, have all been visited and inspected. Bye-laws, which came into force on August 7th, have been left with every occupier of a Fried Fish Shop, Gut Scraper, Rag and Bone Dealer, Fat Melter, Tanner and Leather Dresser, and Bone and

Skin Dealer. A Register is kept at my Office of the names and premises which were in existence at the passing of such Bye-laws. The two Gut Scraping premises have been regularly visited, and the occupiers have been cautioned that the Bye-laws will be strictly enforced.

Food Inspection.—During the year I have made many periodical visits to shops, stalls, and other premises where food is prepared for sale, or deposited for the purpose of sale, and the following articles were either seized or surrendered as unsound and unfit for human food, and subsequently destroyed.

Surrendered :—12 lbs. of Sausage Meat.

2 Boxes of Fish.

1 Cow's Udder.

1 Ox Liver.

18 Sheep's Plucks.

2 Sheep's Livers.

Seized and condemned by a Justice :—2½ Stone of Apples.

STATEMENT A.

				Public Health Acts.	Factory and Workshop Act.
Complaints received	..	..	..	566	3
Visits made to Slaughterhouses	..	..	..	452	0
„ „ „ Bakehouses	..	..	..	10	134
„ „ „ Dairies and Milkshops	..	..	..	144	0
„ „ „ Cowsheds	..	..	..	65	0
Workshops Inspected	..	..	..	40	390
„ Cleansed	..	..	..	4	21
<i>Housing—</i>					
Houses Cleansed	..	..	..	27	11
„ Disinfected	..	..	..	130	0
Overcrowding abated	..	..	..	8	6
Houses Placed in Habitable Repair	..	..	..	8	0
Ditto ditto under House and Town Planning Act	..	..	..	5	0
Houses Closed	..	..	..	8	0
Defective Roofs Repaired	..	..	..	73	11
Rain Water Pipes and Gutters renewed or repaired	..	..	..	97	17
<i>Drainage and Sewerage—</i>					
Houses connected with Sewers	..	..	..	6	0
Privies Abolished	..	..	..	3	0
Privies Converted into Water Closets	..	..	..	3	0
„ and Water Closets Repaired	..	..	..	83	10
New Water Closets Built	..	..	..	7	0
Water Supply for Closets Provided	..	..	..	35	1
Defective Water Fittings to Water Closets Repaired	..	..	..	77	15
Filthy Closets Cleansed and Linewashed	..	..	..	45	3
Closets Unstopped	..	..	..	71	2

New Closet Pans or Apparatus Fixed	..	..	30	..	2
New Seats and Risers Fixed in W.C.'s	..	..	23	..	2
New Floors Laid, or Repaired in W.C.'s	..	..	24	..	9
Drains Unstopped	..	..	81	..	4
" Repaired	..	..	27	..	2
Old Drains Abolished	..	..	9	..	1
New Drains Laid	..	..	20	..	1
Disconnection Syphons Fixed	..	..	7	..	1
" Chambers Built	..	..	7	..	1
Fresh Air Inlet Pipes Fixed	..	..	7	..	1
Foul Air Exit Pipes Fixed	..	..	10	..	1
Bell and other Insanitary Traps Abolished	..	..	29	..	1
Trapped Yard Gullies Fixed	..	..	82	..	7
Defective and Insufficiently Ventilated Soil Pipes	..	..	6	..	0
Sink Waste Pipes Trapped or Disconnected from Drains	..	..	9	..	0
Bath and Lavatory Waste Pipes ditto ditto	..	..	5	..	0
Ashpits Abolished	..	..	48	..	9
Ashbins Provided	..	..	1067	..	135
<i>Nuisances—</i>					
Mannure and Offensive Matters Removed	..	..	59	..	2
Defects Reported to Borough Surveyor	..	..	56	..	0
Animals Improperly Kept or Removed	..	..	75	..	7
Nuisances Detected or Reported	..	..	810	..	275
" Abated	..	..	806	..	270
Notices Served	..	..	795	..	274
Statutory Notices Served	..	..	101	..	1
Other Defects Remedied	..	..	167	..	7
<i>Other Matters—</i>					
Yards Paved	..	..	11	..	2
Seizures, or Surrenders of Unsound Food	..	..	12	..	0
Samples of Water Taken for Analysis	..	..	1	..	0
Water Supply Provided for Domestic Purposes	..	..	4	..	0
Leaky Taps Repaired where drawing from Public Mains	..	..	41	..	14
Ventilation Provided	..	..	188	..	21
Failure to Affix Abstract of Factory Act	..	..	..	..	4
Insufficient or Defective W.C. Accommodation	..	..	..	..	9

I have pleasure in again recording that in no case was it necessary to institute Police Court proceedings to procure the abatement of a nuisance.

DRAIN TESTING STATEMENT B.

The following table shows the locality of Sewer Gas Escapes—

Into Kitchens and Sculleries	..	..	..	..	2
" Cellars	..	..	..	..	4
" External Water Closets	..	..	..	..	1
" Internal Water Closets	..	..	..	..	5
" Dining Rooms and other parts of House	..	..	..	..	7
From Heads and Joints of Rain Water Pipes	..	..	..	..	7
" Joints of Soil and Vent Pipes	..	..	..	..	20
" Defective Drains	..	..	..	..	9
" Defective Traps	..	..	..	..	2

65

During the year attention has been directed to some of the licensed premises in the Borough in order to see whether they

are provided with proper and sufficient water closet accommodation, and in several instances w.c.'s were found to be without any water supply or flushing apparatus provided for cleansing purposes. Other premises inspected under the Factory and Workshop Acts, etc., have also received the same particular attention, and during the year no fewer than 36 closets have been supplied with water and flushing apparatus provided to each closet.

Whenever I have received a complaint of choked closets, or when making an inspection of premises, I have invariably found the choked closets to be those without a proper water supply, and an effective flushing apparatus.

Factory and Workshop Acts.—The total number of workshops on the Register, including bakehouses, is 576. The work of inspection under the above acts is carried out by my assistant ; he also devotes a part of his time to house to house inspection, and rendering me any assistance that I may require. The premises to which particular attention is devoted are :—Bakehouses, domestic workshops, laundries, dressmakers and milliners, tailoresses, shirt makers, bootmakers, board tailors, sack repairers, upholsterers, basket makers, etc. The number of lists received under the Act is 92, and the number of home workers inspected is 704. The total number of outworkers whose names appear on the lists in the Borough is 1,939, outside the Borough 1,320.

In conclusion, I beg to thank the Chairman and members of the Borough and Port Health Committee for the continued support that they have given me in the carrying out of the varied duties connected with the Public Health Department.

I am, Gentlemen,

Your obedient servant,

THOMAS WELLS,

Inspector of Nuisances.

COMMON LODGING HOUSE.

33. No new common lodging houses have been registered during the year. The three that there are in the Borough have been well-conducted throughout the year, and no complaints have been received concerning them.

Certain structural alterations were found necessary in the one in Vineyard Street, and these were carried out upon informal notice being given to the landlord.

The three houses have been constantly visited both by day and by night, and no overcrowding or other irregularity has been found to exist.

OFFENSIVE TRADES.

34. The gut-scraper's business that was moved in 1911 from the Mile End district to the Hythe has now settled down, and no complaints have been received for some months. This is due to a great extent to a new process that has been introduced in these works by which the gut is dealt with in a much fresher condition than it was previously.

The man who occasionally scrapes gut in Mile End still occasionally carries on his business. No complaints were received about his business, nor about that of the fat-melter, who carries on this trade in the town.

35. Several trades or businesses were declared to be offensive trades under Section 51 of the Public Health Acts Amendment Act, 1907, in 1911, and the following table gives the number of these offensive trades that are carried on in the Borough :—

Fish Frier	...	...	...	16
Gut Scraper	...	...	...	2
Fat Melter or Extractor	...	...	...	1
Rag, Bone and Skin Dealer	...	...	...	4
Tanner	...	...	...	1

All these businesses have been constantly visited, and their premises inspected, and in the summer Bye-laws were made for their proper control and regulation. At the beginning of the year there were 19 fish friers in the town, but three have since then given up the business.

SCHOOLS.

36. As in previous years all the public Elementary Schools have been visited by the Medical Officer of Health, and their condition as to ventilation, sanitary arrangements, etc., reported upon to the Education Committee.

It has been again found necessary to draw the attention of this Committee to the unsatisfactory condition of the water supply to St. John's School, Ipswich road, no action had been taken to remedy the present inadequate arrangements which set were out in my last Report.

All the other schools in the Borough are supplied from the town mains.

37. At Barrack Street School the lavatory accommodation was found to stand in need of increase and a new lavatory is to be built during the current year.

38. Several small improvements in the way of the introduction of hopper-windows in certain rooms and the substitution of ventilating open stoves in the place of small open fires have done much in the past year to improve both the ventilation and heating of several of the smaller schools.

39. The recommendations of the memorandum on closure and exclusion from school of scholars suffering from, or those who have been in contact with, infectious disease, are carried out very fully, and every house from which a case is reported from the schools is visited by an officer of the Health Department, but even so very many cases of the non-notifiable infectious diseases are missed. All those who are found to be suffering from an infectious disease and those who are liable to carry infection are excluded from school.

MILK SUPPLY.

40. Again in 1912 as in the previous year the whole of the milking herds of cows in the Borough have been examined for tuberculosis by a veterinary surgeon, once during the first half of the year and again in the autumn.

If at these visits he comes across any cow that he suspects of being tubercular he collects a sample of her milk in a sterile bottle

and transmits it to the Medical Officer of Health for further examination.

In this way seven samples of milk were submitted for further examination and of these one only was found to contain tubercle bacilli when examined in the laboratory. The owner of this cow was interviewed and upon representations being made to him he at once agreed to have the cow slaughtered. Upon subsequent examination the udder alone showed numerous signs of Tuberculosis.

41. The number of cows in the Borough that were altogether examined by the veterinary inspector for this purpose was 475.

Number of Dairies, Cowsheds, etc., in the District.

Cowsheds.	Dairies.	Milkshops.	Persons Registered.
45	38	79	123

Though these numbers are only slightly different from last year's yet there have been a good many changes of ownership, and the Register has been constantly altered. Cow-sheds, dairies, and milk-shops have changed hands yet the number of each has remained much the same.

42. It has been suggested that it would save a good deal of unnecessary alteration of the Register if premises were registered and not persons and that registration would thus be greatly simplified.

But it must be remembered that in outbreaks of infectious disease due to milk, it is the persons occupying the dairy or supplying the milk that must be seen at once, not the premises, and delay might easily arise if the name of the person occupying the premises was not the same as the name in the Register.

So although there may be a little more trouble attached to the present system of registering the individual and not the premises, yet in a milk-borne outbreak such information would be of the greatest value.

43. Over 200 visits have been paid to Dairies, Cowsheds, and Milkshops during the year.

44. The two following leaflets have been sent to all Cow-

keepers in the district upon the Register, and the first has been sent to all Milk Vendors also :—

BOROUGH OF COLCHESTER.

Public Health Department,
36, Stanwell Street.

TO ENSURE THE SUPPLY OF CLEAN MILK.



FIG. A.



FIG. B.

All Cans and Utensils which have been used for milk should first be rinsed in COLD water and afterwards cleansed with STEAM or BOILING water. Then let the Cans stand mouth downwards until used again.

NEVER use milk-eans or pails for holding anything other than milk.

Use only eans and ehurns that have NO VENTILATING HOLES and are RAIN-PROOF as in Fig. A.

NEVER use eans with tops like Fig. B. ; this kind lets in rain, dust and dirt, and the milk is poured out over a dirty rim.

NEVER add a preservative or anything else to milk.

WALTER F. CORFIELD,
Medical Officer of Health.

BOROUGH OF COLCHESTER.

Public Health Department,
36, Stanwell Street.

TO ENSURE THE SUPPLY OF CLEAN MILK.

Only healthy Cows give good milk ; to keep Cows healthy they must be in the open air AS MUCH AS POSSIBLE.

To obtain good clean milk the Cows must be kept CLEAN and WELL GROOMED.

Don't groom in the stalls just before milking as this makes much dust, which falls into the milk ; only wipe over the udders

and teats with a CLEAN damp cloth and dry with a CLEAN cloth. If the udder is very dirty wash with soap and water.

If there are swellings, lumps or sores on the Cow's udder get the Veterinary Surgeon to examine them.

No one who is ill should have anything to do with Cows or Milk.

Always make the milkers WASH THEIR HANDS THOROUGHLY with soap and water just before milking. They must not touch any other part of the Cows than the teats after doing so.

NEVER ALLOW WET MILKING; it is unnecessary, and only adds dirt to the milk.

Milkers should always wear CLEAN WHITE OVERALLS OR SMOCKS while milking; these must be washed ONCE A WEEK at least, and not worn for any other purpose.

Supply feed at least HALF-AN-HOUR BEFORE MILKING, as it makes a lot of dust.

Remove milkpail to dairy DIRECTLY IT IS FULL; don't let it stand about in the cowshed.

WALTER F. CORFIELD,

Medical Officer of Health.

OTHER FOODS.

45. This year the Sanitary Inspector sets out in his report a table showing the meat and other foods that he has condemned during the year.

It is very probable that were a qualified Inspector present at every slaughtering a great deal more meat would be condemned than is condemned under the present conditions.

When there are some twenty slaughter-houses in a town of this size it is utterly impossible for one Inspector, or even half-a-dozen Inspectors, to see all the animals slaughtered in these houses. Many of the larger towns in England are adopting the system that has been a matter of course upon the Continent for many years past, the system of the public slaughter-house under Municipal control. The objections to instituting such an abattoir are small and unimportant when compared to the very great advantages of such an undertaking.

In Colchester, opinion is perhaps not quite ripe for such a change, but it is important to pave the way for a change that public opinion will soon insist upon, and this may be best done by the local authority refusing to grant any fresh licenses for premises to be used as slaughter-houses beyond the ones now in existence.

Number of Slaughterhouses and Bakehouses in the District.

SLAUGHTERHOUSES.		BAKEHOUSES.
Registered.	Licensed.	
10	10	45

SALE OF FOOD AND DRUGS ACTS.

47. The table below gives the results of the analyses carried out during the year :—

Samples.	Number of Samples.	Adulterated.	Nature of Adulteration.
New Milk	45	8	Five, fat abstraction; 13·3, 13·3, 10·0, 10·0, 6·7 per cent. respectively. Two, added water; 9·5, 5·9 per cent. respectively. One 33·3 per cent. fat abstracted and 2·4 per cent. added water Six, Margarine.
Butter	22	6	
Scotch Whiskey	5		
Coffee	5		
Baking Powder	3		
Ground Ginger	1		
Arrowroot	2		
Flour	1		
Mixed Pickles	1		
Ground Mace	1		
Tea	2		
Cake	1		
Gin	1		
Bread	2		
Vinegar	3		
White Pepper	2		
Margarine	1		
Rice	2		
Corn Flour	1		
Syrup	1		
Sausages	1		
Yeast	1		
Cream	1		
Cheese	2		
Condensed Milk	1		
Sweets	3		
Drugs	3		
	114	14	

48. The Drugs consisted of one sample each of Oil of Eucalyptus, Paregoric, and Crushed Linseed,

49. In each instance in which a sample of milk is found to be not genuine, the farm from which the sample came is visited at milking time and a further sample taken for comparison with the first sample.

In the above table the second not genuine sample is from the farm from which the first not genuine milk came, similarly the fourth is from the farm of the third.

It is thus evident that the milkman was not to blame for the deficiency of fat in the milk but the farmer, yet it must not be forgotten that he does not thus avoid the charge of selling milk deficient in fat. In short he is fully responsible for selling fat-deficient milk to his customers, for he should not deal with a farmer who supplies poor milk.

The fifth not genuine sample was a mixture of several milks and no one farm was responsible for its production.

The sixth and seventh not genuine samples were obtained on different days from the same man. When the farm was visited samples were taken from the two herds of cows in it. The milk from one herd contained 3·4 per cent. of fat and 8·5 per cent. of other milk solids, and of the other herd—3·3 per cent. of milk fat and 8·8 per cent. of other milk solids. The farm milk was therefore quite genuine.

In all the above cases in which the milk was found to be not genuine the vendors, and farmers where necessary, were warned.

In the case of the sample where 33·3 per cent. of the fat was deficient, proceedings were taken, and the vendor fined £3 and thirteen shillings costs.

50. The six samples of margarine sold as butter were all bought from the same shop. Two informal samples were first purchased, and when these were returned as not genuine four more samples were obtained. The vendor was prosecuted and fined in all £6 2s. and costs £2 8s.

51. It is to be deplored that the custom of adding colouring matter to milk is so much upon the increase. There can be no doubt that it is done in many cases in connection with the system of "toning down," that is to say, the abstraction of that amount of cream present which is above the legal limit. This deprives the

milk of some of its colour and to make this up a few drops of colouring matter are added.

It may be, as is contended, that the colouring matter itself is harmless but harm lies in the reason for the addition. Milk should be sold exactly as it leaves the farm and not be "doctored" in any way before it is retailed to customers. Unfortunately buyers themselves assist in their own deception by eagerly purchasing unnaturally yellow milk because they think that the high colour is due to richness in cream. Only recently when the matter was being discussed with one of the large milk vendors of Colchester, and he was urged not to sell coloured milk, he replied that if he sold uncoloured milk he would at once lose half his business, and he could not afford to educate the inhabitants up to drinking white milk.

HOUSING.

52. Inspection of the District under the Housing (Inspection of District) Regulations was continued during 1912, the following table gives the number of inspections made and particulars of interest under this heading.

Number of houses 1901.....7,969. 1912 (approx.) 9,500.

Number of houses visited and inspected :—

(1) owing to complaint	...	...	553
(2) owing to infectious disease	...	...	280
(3) during routine work	...	...	2,662

Number of Informal Notices served for sanitary defects 1,070

„ Statutory „ „ „ 102

„ Notices served for Overcrowding ... 14

„ „ „ Uncleanliness ... 38

„ „ „ Complied with ... 1,069

Number of Dwelling-houses Inspected under Section 17
of the Housing, Town Planning, etc., Act 1909... 33

Number of Dwelling-houses represented to the Local
Authority with a view to the making of Closing
Orders ... 13

Number of Closing Orders made ... 13

Number of Dwelling-houses the Defects in which were
remedied without the making of Closing Orders 20

Number of Dwelling-houses which, after the making of
Closing Orders, were put into a fit state for
human habitation ... 2

Number of Demolition Orders made	...	...	6
Number of Dwelling-houses demolished by Owners			
after Closing Orders had been made	...	...	6

53. The defects in these houses were all of the same kind and due to the want of timely repairs. In several instances the houses had been closed for many years, and allowed to fall into ruin, in others the houses were inhabited, but defects had not been properly remedied for years. Lath and plaster walls were found bulging and cracked so that in one or two instances the whole of the upper part of the house tilted away from the perpendicular.

The majority of these houses had insufficient ventilation and lighting. In many houses floor boards were rotten and walls broken and very dirty, and the stairs broken and defective.

Not one of these houses had a proper and sufficient damp-proof course in the external walls, and in several the roof and walls let in the wet, and the whole structure was damp.

54. During the year 50 new dwelling-houses have been erected in different parts of the Borough. By far the larger part of these are houses for the working-classes, and at present there are sufficient dwellings being built by private enterprise to keep pace with the increase in the population.

All new buildings are erected under the supervision of the Borough Surveyor, and no building is occupied until its structure and drainage have been passed by the Health Committee.

55. Details of the house-to-house inspection that was carried out by the Assistant Sanitary Inspector are given in the Sanitary Inspector's Report.

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

56. There was no need for any prosecution to be instituted in connection with any of this work during the year.

57. In one case it was found that outwork was being done in unsatisfactory and unwholesome premises, a notice was served and

the supply of outwork stopped until the premises had been made properly wholesome.

Similarly in one case it was found that outwork was being carried on in a house in which Scarlet Fever had occurred, in this case also the supply of work was stopped until the premises had been disinfected after the removal of the child suffering from the disease.

1.—*Inspection, including Inspections made by Sanitary Inspectors.*

Premises.	Number of	
	Inspections.	Written Notices.
Factories, including Factory Laundries ..	63	3
Workshops, including Workshop Laundries..	315	48
Workplaces, other than Outworkers' premises included in Part 3 of this Report	12	2
Total.. .. .	390	53

2.—*Defects found.*

Particulars.	Number of Defects.		
	Found.	Remedied.	
Nuisances under the Public Health Acts :—			
Want of cleanliness	21	20	
Want of ventilation	21	21	
Overcrowding	6	6	
Want of drainage of floors .. .. .	..	..
Other nuisances	45	42	
Sanitary Accommodation {	insufficient,	4	3
	unsuitable or		
	defective, ..	3	3
	not separate		
	for sexes ..	2	2
Offences under the Factory and Workshop Act :—			
Illegal occupation of underground bakehouse (s. 101) .. .. .	..	..
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) .. .. .	..	..
Other offences, excluding offences relating to outwork which are included in Part 3 of this Report .. .. .	..	..
Total.. .. .	102	97	

3.—Home Work.

Nature of Work.	Outworkers' Lists, Section 107.						Notices served on Occupiers as to keeping or sending Lists.
	Lists received from Employers twice a year.			Lists received from Employers once a year.			
	Lists.	Outworkers.		Lists.	Outworkers.		
		Con-tractors	Work-men.		Con-tractors	Work-men.	
Wearing Apparel, making, etc.	76	..	1876	3	..	12	8
Cleaning and washing
Household linen
Lace, lace curtains and nets
Curtains & furniture hangings
Furniture and upholstery ..	12	..	18	..	..	..	1
Electro-plate
File making
Brass and brass articles
Fur pulling
Cables and chains
Anchors and grapnels
Cart gear
Locks, latches and keys
Umbrellas. etc.	1	..	1	..
Artificial flowers
Nets, other than wire nets
Tents
Sacks	2	..	10	1	..	1	1
Racquet and tennis balls
Paper, etc., boxes, paper bags..
Brush making
Pea picking
Feather sorting
Carding, etc., of buttons, etc..
Stuffed toys
Basket making	2	..	2	..	..	..	..
Chocolates and sweetmeats
Total	92	..	1906	5	..	14	10

OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.—Wearing apparel, making, etc., instances, 1 ; notices served. 1.

OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.—Wearing apparel, making, etc., instances, 1 ; orders made (S. 110), 1.

4.—*Registered Workshops.*

Class.	Number.
Workshops on the Register (s. 131) at the end of the year.	
Bakehouses	45
Domestic Workshops	22
Laundries	11
Dressmaking and Millinery	83
Other Workshops	415
Total Number of Workshops on Register ..	576

5.—*Other Matters.*

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133)	4
Action taken in matters referred by { Notified by H.M. Inspector	3
H.M. Inspector as remediable un- der the Public Health Acts, but not under the Factory and Work- shop Act (s. 5) { Reports (of action taken) sent to H.M. Inspector..	2
Other	
Underground Bakehouses (s. 101) :—	
Certificates granted during the year	
In use at the end of the year	1

BOROUGH INFECTIOUS DISEASES HOSPITAL.

58. The hospital has not been enlarged during the year, the number of beds, 75 (including 20 for small-pox), remaining the same as last year.

59. It was found possible in the late spring to make more definite and satisfactory arrangements with neighbouring districts for the admission to the hospital of their infectious cases. For several years past there had been agreements to this effect with the Wivenhoe Urban and Tendring Rural Councils, but these had seldom been made use of. Now these Councils and the Councils of Brightlingsea, Lexden and Winstree, Walton-on-the-Naze and Frinton-on-Sea all became anxious that those of their inhabitants who caught an infectious disease should be removed to hospital and to enable this to be done agreements were entered into between these Councils and the Borough Council.

60. The following table shows the number of cases admitted to the hospital during the year from the Borough, the Garrison and from outside districts.

	Scarlet Fever.	Deaths.	Diphtheria.	Deaths.	Infectious Contacts.	Enteric Fever.	Deaths.
Colchester Cases..	21	—	24	2	7	—	—
Garrison " "	2	—	4	—	—	—	—
Outside District Cases	26	—	6	1	—	6	1
Total Cases 89	49	—	34	3	7	6	1

This shows that the total number of cases treated in the hospital during the year was 89 with 4 deaths. Three deaths occurred from diphtheria, one child was admitted with a severe type of the disease and died upon the same day. A second death occurred in an infant, who was admitted, suffering from broncho-pneumonia as well as diphtheria. The third child was admitted in a late stage of the disease, her heart became affected, and she died three weeks after admission.

61. In the autumn the Borough Council was approached by the Essex County Council with a view to the admission of cases of Pulmonary Tuberculosis into the hospital.

Two urgent cases were admitted at once, and early this year (1913) arrangements were completed for placing 8 beds for patients suffering from tuberculosis at the disposal of the County Council.

THE INFECTIOUS DISEASES.

Infectious Diseases Notified, 1903-1912.

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Small Pox ..	24	1	0	0	0	0	0	4	0	0
Scarlet Fever ..	100	257	223	37	45	128	82	79	56	28
Diphtheria ..	54	56	60	29	18	41	29	32	29	31
Typhoid Fever ..	17	17	12	12	8	11	5	2	4	1
Erysipelas ..	46	38	38	51	24	22	22	30	45	38
Puerperal Fever ..	0	3	0	0	2	1	4	4	6	0
	242	372	333	129	97	203	142	151	140	98

*Death from Infectious Diseases registered in the Borough,
1903-1912.*

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Small Pox	5	0	0	0	0	0	0	2	0	0
Scarlet Fever	1	6	3	1	0	1	1	2	2	0
Diphtheria	5	7	10	3	1	5	2	2	3	4
Typhoid Fever	2	4	2	2	0	2	0	1	0	1
Erysipelas	0	2	0	3	1	1	2	3	2	0
Puerperal Fever	0	2	0	0	4	0	2	2	3	1
Measles	6	12	0	9	1	9	6	1	7	5
Whooping Cough	7	17	5	19	10	7	3	12	5	2
Phthisis	45	48	49	36	45	47	39	49	27	45

Monthly Notifications, 1912

Month.	Scarlet Fever.	Diph- theria.	Typhoid Fever.	Ery- sipelas.	Acute Poliomye- litis.	Phthisis.	Total.
January	2	2	..	6	..	8	18
February	8	5	..	5	..	4	22
March	7	2	..	8	..	15	32
April .. ..	..	2	..	1	..	3	6
May	1	4	..	4	..	2	11
June .. ..	..	1	..	2	..	6	9
July	1	..	..	4	..	11	16
August	1	3	1	..	1	11	17
September	2	2	..	2	..	6	12
October	2	5	..	3	..	7	17
November	2	3	..	2	1	8	16
December	2	2	..	1	..	4	9
Year 1912.. ..	28	31	1	38	2	85	185

During the year, no cases of Puerperal Fever were notified.

SCARLET FEVER.

62. Last year may be claimed as having beaten all previous records in the smallness of the number of Scarlet Fever cases. Before 1912, the lowest record was 37 cases in 1906, but last year, though the population had considerably increased, only 28 cases were notified. All of these were single cases except in one or two instances in which a second child in the same house was also affected, none of them were so connected as to form even a small outbreak.

63. Out of the 28 cases 23 or 82 per cent. were removed to the Isolation Hospital. No deaths from Scarlet Fever occurred either in the hospital or town.

64. The average stay of the Scarlet Fever cases in hospital, including those from outside districts and from the Garrison was 42 days.

DIPHTHERIA.

65. Two more cases of Diphtheria were notified in 1912 than in 1911. Of the 31 cases which occurred throughout the year, not more than 5 occurred in any one month and only July passed without a case being notified, as is shown in the above table.

66. Out of the 31 cases 28 or 90 per cent. were removed to the Isolation Hospital, and of these 28 cases, two died. One death from Diphtheria occurred at the Essex County Hospital.

67. The average duration of cases of Diphtheria at the Isolation Hospital, including cases from outside districts and from the Garrison was 34 days.

68. The custom of swabbing the throats of all contacts and making bacteriological examination of the material thus removed is still continued, and is undoubtedly of great importance in preventing the spread of the disease in a virulent form. Whenever contacts are found to be harbouring the Diphtheria organism steps are taken to isolate them as carefully as though they were suffering from the disease. In 1912 it was found advisable to remove seven children who were positive contacts to the Isolation Hospital either because there appeared little or no likelihood of their being properly isolated at home or because the number of other children in the house made it unwise to leave them at home.

These seven contacts stayed an average of 15 days in the Isolation Hospital before their throats were freed from the organism.

69. Anti-diphtheritic serum was not administered to these cases and has not been used for positive contacts, who showed no

clinical signs of the disease, for the past three years. It has been found that if a patient, who has been given a prophylactic dose of anti-diphtheritic serum, contract diphtheria, the effects of a second dose of the serum, though it may be many months after the first, may have serious consequences. It has also been the experience at the Isolation Hospital that positive contacts who have not the disease at the time of examination do not develop clinical signs of the disease subsequently, though swabs from their throats may show the presence of the diphtheria bacillus in large quantities.

ENTERIC FEVER.

70. Only one case of Enteric Fever was notified in the Borough in 1912, and this case was isolated at home, all precautions as to disinfection and isolation being carefully supervised.

71. As was explained last year disinfection is carried out at the homes of those suffering from an infectious disease. If they are children, notices are sent both to the Day and Sunday schools.

THE NON-NOTIFIABLE INFECTIOUS DISEASES.

72. A year has now passed and much experience has been gained in the method of dealing with these diseases, which was explained in the Annual Report for 1911.

73. The outbreak of Measles and Mumps which began in that year continued well into 1912, and only ceased when practically every school had been attacked.

74. As in 1911 all the cases of these non-notifiable infectious diseases that were notified by the head-teachers were visited by the Health Visitor and School Nurse, and the diagnosis as far as possible verified. Even so, many cases were missed and frequently when the Nurse was visiting a house for some other reason she found that the children were suffering from one of these diseases.

75. The following table gives the number of each of these diseases in four weekly periods that have been notified to the Public Health Offices during the past year :—

Measles.	Whooping Cough.	Chicken Pox.	Mumps.
50	1	..	43
25	5	..	57
12	2	..	47
1	..	..	29
1	..	15	34
..	21	3	32
1	24	2	22
1	15	8	13
..	18	1	1
2	12	..	2
2	2	20	2
1	3	18	4
..	6	2	3
96	109	69	289

76. Bottles of disinfectant are supplied free of charge from the Public Health Offices to all persons in charge of a case of infectious disease. In many towns this custom of giving away disinfectant has been discontinued on the grounds that the greater part of it is wasted or improperly used. It is probable that a middle course is best, the indiscriminate giving away of disinfectant fluid to anyone that asks is certainly bad, not only is disinfectant wasted, but householders will keep dosing defective drains with disinfectant in the hope of stopping a bad smell instead of sending a complaint to the Sanitary Inspector. But in cases of Infectious Disease, particularly cases of Tuberculosis, the use of disinfectant should be encouraged and its intelligent employment advised.

SMALL-POX AND VACCINATION.

77. No cases of Small-Pox occurred during 1912.

78. The rapidly increasing number of conscientious objectors to vaccination is well shown in the table below. Unvaccinated children are now beginning to fill the Infant Departments of the Schools, and if Small-Pox occur in a school

child and remains unreported for a few days, as is quite possible, the outbreak that will follow will be most extensive and fatal.

Year.	Number of Births.	Number of Vaccinations.	Number of Conscientious Objections.	Percentage of Vaccinations and Objections to the Number of Births.	
				Vaccinations	Objections.
1906	969	707	38	72	4
1907	999	724	61	72	6
1908	976	655	163	65	16
1909	998	615	216	62	22
1910	958	509	264	53	28
1911	975	369	287	38	29
1912	873	382	332	43	38

ACUTE ANTERIOR POLIOMYELITIS AND CEREbro-SPINAL MENINGITIS.

79. Two cases of the former disease were notified under the new regulations making these diseases notifiable. The first case occurred in the middle of August in a child aged 6 years. There was no history of infection, nor could the origin of the disease be traced in any way.

The second case was even more obscure, the child who was notified was only 14 weeks old, was the only child of a newly-married couple and had been fed from birth at the breast only. There was no history of exposure to infection.

80. No case of Cerebro-Spinal Meningitis was notified.

TUBERCULOSIS.

81. The past year has seen great activity being taken for the institution of measures for the prevention and treatment of Tuberculosis. One of the great difficulties in the way of undertaking both prevention and treatment was that of expense. This difficulty has been removed by the National Insurance Act.

82. In considering the prevention of Tuberculosis it is necessary to consider treatment with prevention. It has been found to be the case with the notifiable infectious diseases, that it is impossible to check the spread of an infectious disease unless it is possible to segregate those affected.

83. This is particularly so with Pulmonary Tuberculosis in an advanced form. In the early stages of a mild form of the disease, precautions taken by the affected person are sufficient to prevent his spreading the disease. In the later stages or in the acute form the affected person is much more infectious.

84. The National Insurance Act has made it possible for many cases to be isolated and treated in Sanatoria and similar Institutions.

Towards the end of the year the Borough Council was approached by the County Council with a view to cases of Pulmonary Tuberculosis being sent into the Borough Isolation Hospital. Eventually one of the old wooden ward blocks was adapted for the purpose and approved by the Local Government Board until July 15th, 1913.

85. It was arranged early this year that the County Council should have eight beds in this ward, four to be used for mild or Sanatorium cases at a cost of thirty shillings per bed per week, and four to be for more advanced or Hospital cases at two pounds per bed per week. The Borough Council supplying all necessary food, nursing and medical attendance.

Before the end of the year two cases were admitted to the hospital.

86. In 1913 a Tuberculosis Dispensary will be opened in Colchester. This will be managed by a separate Tuberculosis Officer who will see and advise all patients attending the Dispensary.

87. So soon as this Dispensary is started, and a Medical Officer at work there, the County Council should delegate their powers for giving Sanatorium Benefit to a local Committee. Only in this way can a great deal of unnecessary correspondence and overlapping be avoided.

88. The system of visiting patients with Pulmonary Tuberculosis as laid down in the General Order of the Local Government

Board, dated 19th December, 1912, will be extended to include all cases of Tuberculosis whatever form the disease may take.

89. The following table gives details of the number of cases notified, and under what regulations they were notified. It also shows that several cases were notified more than once :—

	Number of Patients Notified.	Number of Notifications Received.
Regulations, 1908.		
From the Medical Officer of the Infirmary	4	7
„ Poor Law District Medical Officers	5	7
„ Master of the Workhouse ..	—	2
„ Relieving Officer	—	—
Regulations, 1911.		
From the Essex County Hospital	20	24
„ General Medical Practitioners ..	44	48
„ School Medical Inspector ..	12	13
TOTALS	85	101

Number of Notifications transferred in 1912.

From other Districts to Colchester...	... nil
From Colchester to Other Districts	... 19

90. The following table gives the number of deaths of Colchester Residents from Tubercular diseases and the death-rate from Pulmonary Tuberculosis for the last 10 years—

Year.	Deaths from Pulmonary Tuberculosis.	Death-rate of Pulmonary Tuberculosis.	Deaths from other forms of Tuberculosis
1903	36	0·91	11
1904	41	1·03	17
1905	44	1·09	12
1906	32	0·79	20
1907	44	1·07	12
1908	45	1·08	11
1909	38	0·90	21
1910	45	1·06	14
1911	29	·66	10
1912	39	·88	16

LOCAL ACTS, GENERAL ADOPTIVE ACTS AND BYE-LAWS IN FORCE IN THE DISTRICT.

91. A complete list of the Acts and Bye-Laws having a Public Health interest were included in the report for 1911, and it is not then necessary to repeat them this year.

92. Upon the adoption of the Public Health Acts Amendment Act, 1907, an Order was made declaring certain trades, businesses or manufactures to be offensive trades. During 1912 Bye-Laws were made for the Regulation of these trades.

93. The revision of the Bye-Laws dealing with New Streets, New Buildings and the Drainage of New Buildings has received considerable attention during the year, and no doubt fresh Bye-Laws or necessary alterations in the present ones will be adopted during 1913.

CHEMICAL AND BACTERIOLOGICAL WORK.

94. The water-supply to the town has been regularly examined during the year. The table giving the results of the analyses being given earlier in the Report.

95. Three rats that had been found dead in a private garden were sent to the laboratory for examination. A careful investigation was made for signs of Plague and material cultivated bacteriologically, but no plague organisms were discovered.

96. The following table gives the results of other bacteriological work carried out in the laboratory.

Examination of—	Specimens sent by Medical Practitioners.		Specimens taken by, or under the direction of, the M.O.H.	
	Positive.	Negative.	Positive.	Negative.
Throat or Nose Swabs for Diphtheria Bacillus	27	104	49	282
Sputum for the Tubercle Bacillus ..	33	69	6	11
Blood for Widal's (Typhoid) Reaction ..	1	11	—	2

The large number of negative swabs taken by the Medical Officer of Health is due to the fact that no child is considered free from the infection or discharged from the Isolation Hospital until three consecutive negative swabs have been obtained.

97. During the year 135 swabs from persons who had been in contact with cases of Diphtheria were examined, 9 of these were positive and 7 of these positive contacts were removed to the Borough Hospital for isolation until their throats were free from the infection.

RAINFALL RETURNS.

Month.	Total Depth (inches)		Greatest fall in 24 hrs. (at Osborne St. Depot)		Number of days on which 0.01 in. or more fell (at Osborne St. Depot.)	Rainfall for 1911 at Osborne St. Depot.
	Lexden.	Osborne St. Depot.	Depth.	Date.		
January	2.47	1.96	.33	23rd	17	1.00
February	1.26	1.24	.26	23rd	16	.91
March	2.72	2.82	.38	2nd, 21st	22	1.77
April .. ..	.31	.21	.16	9th	5	.74
May	1.23	1.15	.32	9th	12	.76
June	1.85	1.90	.34	30th	13	1.96
July	1.00	1.27	.48	6th	10	.30
August	5.22	5.04	1.20	25th	22	.89
September	2.54	2.61	1.32	20th	11	1.14
October	1.54	1.54	.32	28th	14	2.29
November	1.93	1.89	.27	4th	18	3.03
December	2.06	2.06	.46	25th	18	3.71
Total	24.13	23.69			178	18.50

The details for the above table were kindly supplied by Mr. S. F. Hurnard and the Borough Surveyor.

TABLE I.

Vital Statistics of Whole District during 1912 and previous years.

Year.	Popula- tion esti- mated to middle of each Year	Births.		Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.				
		Uncorrected Number.	Nett.			Of Non-Residents regis- tered in the District.	Of Residents not regis- tered in the District.	Under 1 year of Age.		At all Ages.		
			Number.	Rate.	Number.			Rate.	Number.	Rate per 1000 Nett Births.	Number.	Rate.
1907	40,970	999	999	24.38	517	12.6	18	3	84	84.0	502	12.25
1908	41,450	976	976	23.55	515	12.4	32	0	88	90.2	483	11.65
1909	41,835	998	998	23.85	516	12.3	25	5	89	89.6	492	11.8
1910	42,275	958	958	22.6	551	13.0	43	3	87	90.1	511	12.0
1911	43,463	972	975	22.4	547	12.5	32	24	105	107.7	539	12.4
1912	44,160	871	873	19.7	500	11.3	50	20	56	64.1	470	10.6

Total population at all ages, 43,463.

Number of inhabited houses, 8,997.

Average number of persons per house, 4.8.

Area of District in acres (land and inland water),
11,333.At Census of
1911,

TABLE II.

Cases of Infectious Disease notified during the Year 1912.

Notifiable Disease.	Number of Cases Notified.							Total Cases Notified in each Locality (e.g. Parish or Ward) of the District.				Total Cases Removed to Hospital	
	At all Ages.	At Ages—Years.						North.	South.	East.	West.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.						65 and upwards.
Diphtheria (including Membranous Croup) ..	31	..	8	16	5	2	..	..	6	10	7	8	28
Erysipelas ..	38	..	3	6	5	9	11	4	9	11	14	4	..
Scarlet Fever ..	28	1	8	11	3	1	1	..	4	7	14	3	24
Enteric Fever ..	1	..	..	..	1	..	..	..	..	1	..	..	..
Poliomyelitis ..	2	1	..	1	..	..	..	..	1	1	..	..	..
Pulmonary Tuberculosis ..	85	..	4	13	18	40	9	1	21	16	20	28	..
Total ..	185	2	23	50	32	52	21	5	41	46	55	43	52

Isolation Hospital, Mill Road, Mile End, Colchester, provided by Colchester Borough Council.

TABLE III.

Causes of, and Ages at Death during the Year 1912.

Causes of Death.		Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District								Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District	
		All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.		65 and upwards.
All causes: {	Certified ..	459	53	12	14	8	24	66	112	170	141
	Uncertified ..	11	3	..	1	..	1	1	1	4	..
<hr/>											
Enteric Fever .. ..	..	1	..	..	..	..	1	..	..	..	1
Measles .. ..	..	5	1	2	2	..	..	..	..	..	..
Whooping Cough ..	..	1	..	..	..	..	..	..	..	1	..
Diphtheria and Croup ..	..	3	..	..	2	1	..	..	..	..	4
Influenza .. ..	..	2	..	..	..	..	..	..	1	1	1
Phthisis (Pulmonary Tuberculosis) .. ..	..	39	..	1	1	..	9	20	7	1	15
Tuberculous Meningitis ..	..	7	2	2	2	1	..	..	..	..	4
Other Tuberculous Diseases ..	..	9	..	1	1	1	3	2	1	..	6
Cancer, malignant disease ..	..	47	..	..	..	..	..	5	28	14	13
Rheumatic Fever .. ..	..	1	..	..	..	..	..	..	1	..	1
Organic Heart Disease ..	..	64	..	1	..	1	2	7	17	36	18
Bronchitis .. ..	..	32	7	1	..	..	..	1	6	17	9
Pneumonia (all forms) ..	..	27	4	1	4	2	2	5	1	8	9
Other Diseases of Respiratory Organs .. ..	..	4	..	..	..	..	1	2	1	..	1
Diarrhoea and Enteritis ..	..	3	1	1	1	..	..	..	..	..	2
Appendicitis and Typhlitis ..	..	4	..	..	..	..	1	2	1	..	4
Cirrhosis of Liver .. ..	..	8	..	..	..	..	..	..	5	3	1
Alcoholism .. ..	..	1	..	..	..	..	..	..	1	..	..
Nephritis and Bright's Disease	..	11	..	..	..	..	..	2	6	3	6
Puerperal Fever .. ..	..	1	..	..	..	..	..	1	..	..	1
Other Accidents and Diseases of Pregnancy and Parturition	..	3	..	..	..	..	..	3	..	..	1
Congenital Debility and Malformation, including Premature Birth .. ..	..	27	27	..	..	..	..	..	..	..	3
Violent Deaths, excluding Suicide .. ..	..	14	2	1	..	1	2	5	3	..	7
Suicide .. ..	..	2	..	..	..	..	..	..	2	..	..
Other Defined Diseases ..	..	151	12	1	2	1	3	11	31	90	34
Diseases ill-defined or unknown .. ..	..	3	..	..	..	..	1	1	1	..	..
		470	56	12	15	8	25	67	113	174	141

TABLE IV.

INFANT MORTALITY, 1912.

*Net Deaths from stated causes at various Ages under
• One Year of Age.*

Cause of Death.				Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	1-3 Months.	3-6 Months.	6-9 Months.	9-12 Months.	Total Deaths under 1 Year.
All Causes	Certified ..	..	..	17	7	1	1	26	10	5	6	6	53
	Uncertified ..	..	..	2	..	..	..	2	..	..	..	1	3
Measles .. .. .				..	..	..	..	..	..	..	..	1	1
Tuberculous Meningitis ..				..	..	..	..	..	..	1	..	1	2
Convulsions				1	1	..	..	2	1	1	2	3	9
Bronchitis.. ..				..	1	1	..	2	3	1	1	..	7
Pneumonia (all forms) ..				..	1	..	..	1	1	..	1	1	4
Enteritis .. ..				..	1	..	..	1	..	..	..	..	1
Suffocation, overlying ..				..	..	..	..	..	..	1	..	1	2
Congenital Malformations ..				3	1	..	..	4	2	..	1	..	7
Premature Birth				11	1	..	1	13	1	..	..	..	14
Atrophy, Debility and Marasmus				3	1	..	..	4	1	1	..	..	6
Other Causes				1	..	..	..	1	1	..	1	..	3
				19	7	1	1	28	10	5	6	7	56

Net Births in the Year... { Legitimate ... 828
 { Illegitimate ... 45

Net Deaths in the Year of { Legitimate infants ... 51
 { Illegitimate „ ... 5

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